# SYNOPSIS

## "A Cross Sectional Study of Contextual Influence on Cognitive Distortion, Locus of Control, Physical and Psychological Distress among Substance Using Adolescents."

A Synopsis

Submitted to

Swami Ramanand Teerth Marathwada University, Nanded

for the Degree of Doctor of Philosophy in Psychology

Under the Faculty of Social Sciences

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**April 2016**

# "A Cross Sectional Study of Contextual Influence on Cognitive Distortion, Locus of Control, Physical and Psychological Distress among Substance Using Adolescents."

## Introduction

Use of substances by a significant number of young people has been on the increase worldwide. Increased use over the past decades, tendency towards multiple use of substance and earlier age of onset has all been noted amongst these young generation (FatoyeFO; 2003).

During adolescence there is a high level of emotional distress and turmoil, with 6-20% of general adolescent population suffering various types of mental health problem (Crome IB; 2004)]. Abuse of alcohol, tobacco or other psychoactive substances has been reported to contribute to the increase in the incidence of some psychosocial problems (Olfson M, Shea S, FederA ; 2000).

Adolescents that abuse substances have higher prevalence of physical and psychological health problems compared with the general adolescent population (Stanley PC, Eneh AU, Essien AA; 2005). Although several studies have reported findings concerning the association between substance abuse and physical as well as emotional/behavioural problems, little research has investigated this association among non-hospitalized college adolescents. This health related problemsvaries depending on the type of substances abused and the degree of involvement in the abuse. Epidemiological studies have noted that much of the substance abuse among youths take place in college (Swadi H;2000&Gilvary E;1999). Since substance abuse especially in adolescence interferes with normal adolescent development by affecting their physical as well as mental health, studies of college populations are therefore important for an understanding of the factors and dynamics associated with substance abuse in the adolescent population.

In this context, the present investigation has made its effort to study the cognitive distortion, locus of control, physical & psychological distress of college adolescents in relation to their contextual factors that are use of substancetype, locality and social economic status.

Cognitive distortion (CD) is a normal psychological process that all human beings engage in, regardless of age, gender, sexual orientation, race, culture or socio-economic group. In general CD is 'faulty thinking' or 'distorted thinking''. Cognitive dissonance/ distortion', was firstly defined by Festinger(1957), and the term is used to describe the highly uncomfortable psychological state that occurs when we try to hold two incompatible beliefs, attitudes or thoughts in our minds at the same time. The incompatibility is psychological in nature (i.e.' causing psychological discomfort), not necessarily logical.

## Physical Distress

Physical distress characterized as an aversive, negative state in which coping and adaptation processes of body fail to return an organism to physiological homeostasis (Carstens and Moberg 2000; Moberg 1987; NRC 1992). Progression into the maladaptive state may be due to a severe or prolonged stressor or multiple cumulative stressful insults with deleterious effects on the physical condition. Distress can follow both acute and chronic stress, provided that the body's biological functions are sufficiently altered and its coping mechanisms overwhelmed (Moberg 2000).

## Psychological distress

Psychological distress is a major problem of present era. Due to advancement of science and technology person experiences high level of stress which may have adverse impact on their emotional, physiological, cognitive, and behavioral state. Experience of high level of stress lead to physical as well as psychological distress and play an important role in development of different types of psychological disorders, such as anxiety,

depression, mood disorders or various physical problems like cancer, heart attack, and migraines etc.

## Locus of control

Locus of control in social psychology refers to the extent to which individuals believe that they can control events that affect them. Understanding of the concept was developed by Julian B. Rotter in 1954, and has since become an important aspect of personality studies.

Within psychology, Locus of Control is considered to be an important aspect of personality. The concept was developed originally by Julian Rotter in the 1950s (Rotter, 1966). Locus of Control refers to an individual's perception about the underlying main causes of events in his/her life. In other words locus of control orientation is a belief about whether the outcomes of our actions are contingent on what we do (internal control orientation) or on events outside our personal control (external control orientation)."

## Significance of study

The prevalence of psychological disorders or mental illness among substance-abusing adolescents who may not present with overt psychiatric manifestations since such adolescents may not appreciate their problems and therefore will not present to the hospital, there is paucity of reports on physical as well as mental illness associated with substance abuse among the general adolescent population.

The Present study will provide useful information regarding this population that will assist health professionals in designing effective preventive measures for them. The findings of the present study would also signify its role by sounding an alarm for parents, teachers, pediatricians and others responsible for adolescent's health that smoking and alcohol by adolescent may well signal the fire of physical as well as mental illnesses and other psychological and behavioural disorders.

This study supports the increasing appreciation that adolescent using substances are clinically important, even at apparently low levels. Adolescent

using substance and its multifarious linkages with physical and mental health symptoms focus attention on the fact that early identification of adolescent using substance may help not only to avert later health risk, but also may assist in identifying adolescents at increased risk for substance use and psychiatric problems.

## Review of literature

In research of Kate E. Walton and Brent W. Roberts (2004) two studies were conducted to test the relationship between substance use and personality. Participants in Study 1 (*N*=118) completed measures of the Big Five and additional personality inventories and were classified as alcohol and drug abstainers, moderate users, or heavy users based on self-reports of substance use. In Study 2, observer ratings of personality (*N*=172) were gathered in addition to self-reports (*N*=545). Across both studies and self and observer ratings, heavy users consistently scored lower than the other groups on measures of conscientiousness, impulse control, and agreeableness. Abstainers scored lower than moderate and heavy users on extraversion. Contrary to some previous research (e.g., Shedler& Block, 1990), moderate users were not more emotionally stable than abstainers.

Wilson C Igwe and Ngozi C Ojinnaka (2010) determined the prevalence of psychosocial dysfunction and depressive symptoms among adolescents who abuse substance and also note the influence of socio-demographic factors and type of substance on the pattern of dysfunction in their study. A cross-sectional study was carried out among 900 adolescents selected from 29 secondary schools in Enugu metropolis. A multi-stage sampling procedure was used to select the students. The student drug use questionnaire was used to screen respondents for substance abuse. Those who were abusing substance and matched controls (non substance abusers) were assessed for psychiatric symptoms using the 35-item Pediatric Symptom Checklist (PSC) and the Zung Self-rating Depression Scale (SDS). Social classification was done using the parental educational attainment and

occupation. Result revealed that a total of 290 students were current substance abusers. The substances most commonly abused were alcohol (31.6%), cola nitida (kola nut) (20.7%) and coffee (15.7%). Using the PSC scale, 70 (24.1%) subjects compared to 29 (10.7%) of the controls had scores in the morbidity range of ≥ 28 for psychosocial dysfunction. This was statistically significant ($\chi 2 = 17.57$ $p = 0.001$). Fifty-four subjects (18.6%) had scores in the morbidity range of ≥ 50 for depressive symptoms using the Zung SDS compared to 21 (7.7%) of controls. This was statistically significant ($\chi 2 = 14.43$, $p = 0.001$). Prevalence of dysfunction was not significantly related to age in both subjects and controls ($\chi 2 = 4.62$, $p = 0.010$, $\chi 2 = 4.8$, $p = 0.10$ respectively). Also using both scales, there was no significant relationship between psychosocial dysfunction and gender or social class in both subjects and control. The prevalence of dysfunction using both scales was significantly higher in multiple abusers compared to single abusers. Subjects abusing alcohol scored more on both scales compared to those abusing other substances. Overall they concluded the Prevalence of psychosocial dysfunction is higher in adolescents abusing substance compare to controls. The prevalence of psychiatric morbidity was not related to the age, gender or social classes in the study population. We advocate periodic screening of our adolescents for drug abuse regular evaluation of such group for possible psychopathology.

Grace Chang, Lon Sherritt, and John R. Knight (2005) examined the association among adolescent cigarette smoking, mental health symptoms including substance use disorders, and mental health treatment among adolescents treated at a large, hospital-based young adult clinic. Observational study of 486 adolescent patients presenting for routine medical care. Results revealed that Participants were two-thirds female with an average age of 16.6 years and of diverse ethnic background; 129 (28.6%) reported ever-using tobacco products, and 68 (14%) were current smokers who had an average of 2 cigarettes per day. Current smoking was associated with significantly increased odds of having mental health symptoms and substance use

disorders, even after controlling for age and previous mental health treatment, and in both boys and girls.

In study of George Giannakopoulos, Chara Tzavara, Christine Dimitrakaki, Gerasimos Kolaitis, Vasiliki Rotsika and YannisTountas (2010) attempts was made to assess the association between adolescents' smoking status and their emotional/behavioural problems after controlling for a number of possible confounders (i.e. age, gender, parental smoking status, exposure to family smoking, family socioeconomic status, adolescents' leisure time) in a Greek nation-wide school-based sample. Participants completed a questionnaire which retrieved information about age, gender, family socioeconomic status, smoking status, parental smoking, adolescents' leisure time and emotional/behavioural problems. Data were modeled using multiple logistic regression analysis with adolescents' smoking status as the dependent variable. Results revealed that a total of 1194 (i.e. 63% response rate) of self-reported questionnaires (40.1% boys, 59.9% girls; 12-18 years old) were returned. Data from 1030 participants were analysed. Cigarette smoking was strongly associated with higher levels of emotional/behavioural problems ($p < 0.001$) and the association was not moderated (OR = 1.13, 95% CI: 1.08-1.18) after controlling for the effects of other covariates. Emotional symptoms, conduct problems and hyperactivity/inattention were all significantly associated with adolescents' current smoking. Overall their study supports the association between smoking and emotional/behavioural problems among adolescents. Addressing adolescents' needs regarding their emotional/behavioural health could be helpful in the development of effective anti-smoking strategies in school environment and elsewhere.

Thomas A. Burling and Daniel C. Ziff (1988) compared the tobacco smoking of alcohol and drug abuse patients in their study. The subjects were male patients (67 alcohol, 60 drug, and 13 mixed alcohol and drug abusers) of a Veterans Administration substance abuse program who had completed the Tolerance Questionnaire (Fagerstrom, 1978) and the Michigan Alcohol Screening Test (Skinner, 1979) as part of routine intake assessment

procedures. As expected, an extremely high percentage (89.6%) of the alcohol abusers reported smoking cigarettes. Interestingly, an equally high prevalence of smoking was noted among the drug (90.0%) and mixed substance abuse (100%) groups. Comparisons conducted between abuse groups indicated that the alcohol abusers smoked significantly more cigarettes per day and had significantly higher Tolerance Questionnaire scores than the drug abusers, but did not differ from the mixed abuse group on any smoking variable.

Additional comparisons of the total substance abuse population with a national sample of similarly aged males indicated that only the alcohol group smoked more cigarettes per day, but that all substance abuse groups smoked higher nicotine delivery cigarettes than the national sample.

## Statement of the problem

To study the contextual influence on cognitive distortion, locus of control, physical and psychological distress among substance using adolescents.

## Objective

1. To study the variance in cognitive distortion of substance user and non-user adolescents.
2. To study the inhabitance effect on adolescents' cognitive distortion.
3. To study and compare the cognitive distortion among adolescents belonging to high, middle and low Social-Economical-Status (SCS).
4. To study the effect of following interaction among various variables on adolescents' cognitive distortion.
   - ✓ Substance type * Inhabitance
   - ✓ Substance type * SES
   - ✓ Inhabitance *Family Type
   - ✓ Gender * Inhabitance * family Type

5. To study and compare the locus of control criteria of substance using and non-using adolescents.
6. To study the inhabitance effect on adolescents' locus of control.
7. To study and compare the locus of control criteria among adolescents belonging to high, middle and low Social-Economical-Status (SCS).
8. To study the effect of following interaction among various variables on adolescents' locus of control.
   - ✓ Substance type * Inhabitance
   - ✓ Substance type * SES
   - ✓ Inhabitance *Family Type
   - ✓ Gender * Inhabitance * family Type
9. To study the variance in experience of physical distress of adolescents in relation to their substance using status.
10. To study and compare the physical distress between adolescents belonging to rural and urban community.
11. To study the influence of Socio-Economical–Status on physical distress of adolescents.
12. To study the effect of following interaction among various variables on adolescents' psychological distress.
    - ✓ Substance type * Inhabitance
    - ✓ Substance type * SES
    - ✓ Inhabitance *Family Type
    - ✓ Gender * Inhabitance * family Type
13. To study and compare the incidence of psychology distress among adolescents in relation to their substance using status.
14. To study the inhabitance effect on adolescents' occurrence of psychological distress.

15. To study and compare the psychological distress among adolescents belongs to high, middle and low Social-Economical-Status (SCS).
16. To study the effect of following interaction among various variables on adolescents' psychological distress.
    - ✓ Substance type * Inhabitance
    - ✓ Substance type * SES
    - ✓ Inhabitance *Family Type
    - ✓ Gender * Inhabitance * family Type

## Hypothesis

a) Cognitive distortion will be significantly different for substance user and non-user adolescents.

b) There will be significant difference in cognitive distortion between adolescents belonging to rural and urban community-

c) Socio-Economic Status will be significant to influence adolescents' cognitive distortion

d) All possible interaction among substance type, inhabitance and SES will be significant on cognitive distortion of adolescents.

e) There will be significant difference in locus of control between substance user and non-user adolescents.

f) There will be significant variance in locus of control of adolescents in relation to their inhabitance.

g) High, Middle and low Socio-Economic Status adolescents will be significantly different in their locus of control.

h) All possible interaction among substance type, inhabitance and SES will be significant on locus of control of adolescents.

i) There will be significant variance in physical distress (CMI) between substance user and non-user adolescents.

j) Inhabitance will be significant on physical distress (CMI) of adolescents.

k) High, Middle and low Socio-Economic Status adolescents will be significantly different in their experience of physical distress.

l) All possible interaction among substance type, inhabitance and SES will be significant on physical distress of adolescents.

m) There will be significant difference in psychological distress of adolescents according to their substance using status.

n) There will be significant difference in psychological distress between adolescents belonging to rural and urban community.

o) Socio-Economic Status will be significant to influence adolescents' cognitive distortion.

p) All possible interaction among substance type, inhabitance and SES will be significant on psychological distress of adolescents.

## Method

### Sample

The present study will be conducted among college students of Satara district of Maharashtra. The college students will be chosen because they provide the most accessible population of adolescents who would have using various substances long enough to affect their psychological aspects considered in this study. Total 240 respondents will be constituted with two sub-groups namely substance user and non-user group. A purposive sampling method will be employed to select the sample as only those who are using substance (Tobacco and alcohol) will be comprised under substance user group and those not using any substance will be labeled as non substance user. These both subgroups will be constituted with equal number of adolescents belonging to rural and urban community. Further each sub groups will be comprised of equal number of adolescents from high, middle and low SES group. The distribution of total sample is depicted as follows-

**Table-1**

**Sample Distribution**

| *Substance Using Status→* | *Substance User* | | *Substance Non-User* | | *Total* |
|---|---|---|---|---|---|
| *Inhabitance →* *SES ↓* | *Urban* | *Rural* | *Urban* | *Rural* | |
| *High* | *n=20* | *n=20* | *n=20* | *n=20* | *n=80* |
| *Middle* | *n=20* | *n=20* | *n=20* | *n=20* | *n=80* |
| *Low* | *n=20* | *n=20* | *n=20* | *n=20* | *n=80* |
| *Total* | *n=60* | *n=60* | *n=60* | *n=60* | *N=240* |

## Variable

**Name, nature, category and level of all considered variables under present study will be described as follows-**

**Table -2**
**Description of variables**

| Name of Variable | Category of Variable | No. of Level / Dimensions | Name of Level | Nature of variable |
|---|---|---|---|---|
| Substance Using Status | IV | 2 | • Substance User<br>• Substance Non-User | Categorical (Nominal) |
| Inhabitance | IV | 2 | • Rural<br>• Urban | Categorical (Nominal) |
| SES | IV | 3 | • High<br>• Middle<br>• Low | Categorical (Nominal) |
| Physical Distress | DV | 13 | • Eyes and ears<br>• Respiratory system<br>• Cardiovascular system Digestive tract<br>• Musculoskeletal system<br>• Skin<br>• Nervous system<br>• Genito-urinary system<br>• Fatigability<br>• Frequency of illness<br>• Miscellaneous diseases<br>• Habits | Measurable (Continuous) |
| Psychological distress | DV | 6 | • Inadequacy<br>• Depression<br>• Anxiety<br>• Sensitivity<br>• Anger<br>• Tension | Measurable (Continuous) |
| Locus of Control | DV | 5 | • Neuroticism<br>• Extraversion<br>• Openness<br>• Agreeableness<br>• Conscientiousness | Measurable (Continuous) |
| Cognitive Distortion | DV | 7 | • Self-Criticism (SC)<br>• Self-Blame (SB)<br>• Helplessness (HLP)<br>• Hopelessness (HOP)<br>• Preoccupation with Danger (PWD) | Measurable (Continuous) |

## Research design

To reach out the objectives of present investigation 2X2X2 factorial design will be used as depicted below;

**Table 3.3**

**2 X 2 X 3 Factorial Designs**

| Substance Using Status→ Inhabitance (B) ↓ SES ( C) ↓ | | Substance User $A_1$ | Substance Non User $A_2$ |
|---|---|---|---|
| Rural B1 | High C1 | A1B1C1 N=20 | A2B1C1 N=20 |
| | Middle C2 | A1B1C2 N=20 | A2B1C2 N=20 |
| | Low C3 | A1B1C3 N=20 | A2B1C3 N=20 |
| Urban B2 | High C1 | A1B2C1 N=20 | A2B2C1 N=20 |
| | Middle C2 | A1B2C2 N=20 | A2B2C2 N=20 |
| | Low C3 | A1B2C3 N=20 | A2B2C3 N=20 |

## Measurement outcomes

### *Cognitive Distortion Scales (CDS)*

Cognitive Distortion Scales (CDS) developed by John Briere will be used. The CDS is a 40-item, self-assessment of cognitive distortions for adults ages 18 years and older. The CDS scales reflect five types of cognitive distortion: Self-Criticism (SC), Self-Blame (SB), Helplessness (HLP), Hopelessness (HOP) and Danger (PWD).

### *Locus of Control scale*

To measure the External and Internal Locus of control Levenson's Locus of Control scale developed by Sanjay Vohra (1992) will be used. This is Likert type 5 point scale and consists 24 items with eight statements fo reach subcategory which included: (P) powerful others, (C) chance control, and (I) individual control. The Split out, odd-even and test-retest reliability of this test was found to be .72, .72 and .76 respectively. The predicted validity as well as concurrent validity against Rotter's Locus of Control is also found to be high.

### *Cornell Medical Index Health Questionnaire (CMI)*

To measure or assess the physical, emotional, psychological as well as total health status of the subjects Cornell Medical Index Health Questionnaire (CMI) adapted by N. N. Wig, D. Perishad and S. K .Verma (1971) in English will be used. The Cornell Medical Index (CMI) is a well-known health questionnaire, of established value as an aid to clinical diagnosis and as a screening procedure. This scale assesses Physical distress (A-L), emotional and psychological distress ( M-R ) as well as Total Distress (A-R).

## Procedure

The whole sample will be comprised of 240 adolescents including 120 those using substance whether tobacco or alcohol or both (Substance User Group) and 120 adolescents not using any substance at all (Substance Non-User). Both subgroup will be equally selected from urban and rural population. These both groups will be comprised of equal number of adolescents from high, middle and low socio-economic status. After constituting the sample they will be administered on considered measure of cognitive distortion, locus of control, physical and psychological distress. Obtained data will be analyzed by statistical techniques.

## Statistical Analysis

Looking into the aim of present research study statistical methods will be used as given below:

- Description statistic i.e. means and S.D. will be computed.
- Analysis of Variance (ANOVA)

## Result & discussion

The score will be tabulated in the respective tables, there after the obtained results will be discussed and interpreted in the light of previous studies & hypotheses formulated for the purpose of this study.

## Expected outcomes & conclusions

Based on citation of respective studies and reviews done in the past, it will be expected that variation in physical & psychological distress, locus of control and cognitive distortion among adolescents those using substance will be significantly influenced by their contextual aspects .

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# Chapterisation

The present study will consist following chapters

| | |
|---|---|
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| Chapter II | Review of Literature |
| Chapter III | Methodology |
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| | 2. Objectives |
| | 3. Hypotheses |
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| | 5. Research Design |
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